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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,974	06/22/2006	Yuji Ando	2936-0278PUS1	8403
2292 7590 03/02/2010 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER BERNSTEIN, DANIEL A				
ART UNIT		PAPER NUMBER		
3743				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/583,974

Applicant(s)

ANDO ET AL.

Examiner

DANIEL A. BERNSTEIN

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1, 3 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3 and 8 rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2004-162936 A to Hara in view of US 4,426,923 to Ohata and US 2004/0216732 to McFadden.

In regards to claim 1, Hara discloses a steam cooking apparatus (see Fig. 9), comprising: a heating chamber (heating chamber 11) in which food is placed (see food product at 70); a steam generating device (47); a sub-cavity provided in a ceiling part of the heating chamber (see sub-cavity in the ceiling of the oven at 23); heating means (heater 40) provided inside the sub-cavity (40 is inside the sub-cavity at 23); an upper jet hole (upper jet holes at 30) formed in a floor panel of the sub-cavity (holes at 30 are formed in the floor of the sub-cavity); a side jet hole (side jet hole 32).

Hara does not teach that there is a lower jet hole on each side wall of the heating chamber, the side jet hole jetting out steam in a lateral direction of the heating chamber;

Ohata discloses a lower jet hole on each side wall of the heating chamber where the side jet hole jets out steam in a lateral direction of the heating chamber (see annotated Fig. 2 of Ohata below).

Hara does not teach a duct connecting between the sub-cavity and the side jet hole.

Hara discloses a fan (blower 20) that increases strength of steam jetted out through the upper jet hole and the side jet hole (fan 20 will inherently increase the strength of steam jetting out through the upper and side jet hole, because when the blower 20 sucks steam out of the cooking chamber a negative pressure differential will cause incoming steam to rush into the chamber);

Ohata teaches a duct connecting between a sub-cavity and a side jet hole (see annotated Fig. 2 below).

Hara disclose supporting means (60) supporting the food (food product 70) inside the heating chamber (11), and spaced apart from a floor surface of the heating chamber see Fig. 9 of Hara, where the food product is supported above and spaced apart from the floor surface of the cooking chamber by a plate at 60), wherein steam generated by the steam generating device (47) is introduced into the sub-cavity (steam flows from 47 to the sub-cavity where it is heated by heater 40) and is heated by the heating means (40), and then part of the steam is jetted out through the upper jet hole (steam enters the heating chamber 11 through apertures 30 from the sub-cavity 23) toward the food (Fig. 9 shows steam exiting the top apertures 30 and impinging from above on the food product 70).

Hara does not teach that the rest of the steam is guided through the duct to the side jet hole to be jetted out through the side jet hole toward the food.

Ohata teaches steam guided from a sub-cavity located in the ceiling of a heating chamber in which the steam is directed to a side jet hole on each side of the heating chamber so that the steam can impinge upon the food product from below (see annotated Fig. 2 below).

Ohata teaches a fan (7) that moves steam from the cooking chamber to be recirculated to apertures positioned on the lower part of each side wall of the heating chamber (see Fig. 2).

Hara does not teach that the side jet hole is located below the supporting means, **such that the steam from each side jet hole enters into a space defined by and below the supporting means, flows in the lateral direction under the supporting means and meets under the food.**

Ohata teaches a support rack at 13 where the food product is positioned in a state "floating" above the floor of the heating chamber (8) and where a side jet hole is located below the support so that steam enters the chamber and cooks the food product from below (see Fig. 6 where the heating chamber has two oppositely opposing side ducts that have openings at the bottom of the heating chamber where the steam enters through apertures at 25). Ohata also teaches that the steam from the side jet hole flows inside a space (Ohata shows that steam flows from the side holes 25 to the cooking chamber below 13) defined immediately below the supporting means in a lateral direction (see Fig. 6, where Ohata teaches two side jet holes 25 such that the steam from the side jet hole flows inside a space defined immediately below the supporting means in a lateral direction).

In regards to the amendment the side jet hole is located below the supporting means, **such that the steam from each side jet hole enters into** a space defined by **and** below the supporting means, **flows in the lateral direction under the supporting means and meets under the food**, Ohata teaches that the steam enters laterally from the ducts under the supporting means 13, where the steams from both ducts will collide and meet below the food product (see Fig. 6). However, although some of the steam would most likely collide and meet under the food product, Ohata does not specifically show steam arrows meeting under the food product supported by the food rack.

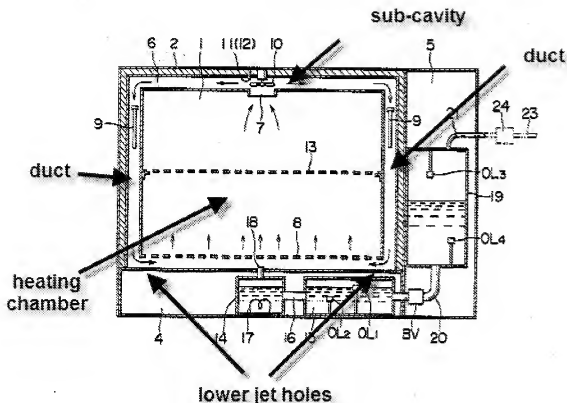
McFadden teaches a speed cooking oven which is a hybrid oven. McFadden explains that a hybrid oven combines microwave energy and at least one other thermal source such as convection, radiant energy or steam ([0003]). McFadden shows side jet holes in which steam flows from each side of the oven and meets under the food product supported on a rack (side jet holes at 18a and 18b jet out steam at 33a and 33b which meets and collides under the food product at 10).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to combine Hara with Ohata for the purpose of directing a portion of the steam from the sub-cavity to apertures located on the lower part of each sidewall so that the food product can be cooked from above and below to better assure even cooking. It is well known in the art to direct steam below the food product as evidenced by Hara. It would have been obvious to someone of ordinary skill in the art to direct the steam in a cooking chamber from above and below to solve the to solve the problem of cooking food more evenly. Therefore it would have been obvious to

combine Hara and Ohata because a particular known technique for directing the flow of steam to the lower portion of a cooking chamber was recognized as part of the ordinary capabilities of one skilled in the art and all of the claimed elements were known in prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to combine Hara with McFadden for the purpose of more evenly cooking the food product. McFadden teaches that it is well known in the art to cook food using side jet holes above and below the food product for the purpose of more evenly cooking the food product. Speed cooking ovens tend to cook food faster than conventional ovens but tend to sacrifice taste for a faster cooking time. McFadden shows that in order to evenly cook a food product in speed cooking oven it is beneficial to direct the steam through side jet holes so that the steam impinges above and below the food to promote even cooking. Therefore, it would have been obvious to someone of ordinary skill in the art to combine Hara with McFadden in order to cook food more evenly thus reducing cooking time improving the taste of the food.

FIG. 2



In regards to claim 3, Hara in view of Ohata and McFadden discloses the steam cooking apparatus of claim 1, wherein the side jet hole (lower jet holes, see annotated Fig. 2, Ohata) is so positioned and/or directed that, the steam jetted out from each side meets under the food (steam is directed from the sub-cavity through side ducts and enters through the lower jet holes meeting below and impinging on the food product from below).

In regards to claim 8, Hara in view of Ohata and McFadden discloses the steam cooking apparatus of claim 1, but does not teach that a total area of the side jet hole is larger than a total area of the upper jet hole.

It would have been obvious to design the side jet holes of Hara in view of Ohata so that the total area of the side jet hole is larger than the total area of the upper jet hole for the purpose of directing more steam to the lower side jet holes. Designing the size of the lower jet holes in relation to the upper jet holes is an obvious design choice, because it changes the amount of steam being delivered to different areas of the heating chamber. It would have been obvious to someone of ordinary skill in the art to modify the hole sizes of the lower and upper apertures in order to create a cooking environment where the food product is cooked more evenly. Furthermore, it is well known and obvious that if the apertures in the upper cavity were too large in relation to the lower apertures, too much steam would flow out of the upper apertures because they are located upstream the lower apertures. Steam and gas tend to flow towards the path with the least amount of resistance and making the upper apertures too large would cause most of the steam to flow out of the top of the chamber.

Response to Arguments

3. Applicant's arguments filed 11/18/2009 have been fully considered but they are not persuasive.

In regards to claim 1, the applicant argues that Ohata does not teach that steam jets out of the side jet holes. The applicant contends that only air jets out of the side jet holes. The examiner respectfully disagrees, since there is steam circulating throughout the chamber and since the fan 10 in Fig. 6 is recirculating fluids internal to the chamber, there will inherently be an amount of steam recirculating and jetting out of the side jet holes. Furthermore, Ohata teaches in Fig. 6 that steam is introduced to the chamber

from the side jet holes in a lateral direction above the ventilation net in a space defined by and below the supporting means.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DANIEL A. BERNSTEIN** whose telephone number is (571)270-5803. The examiner can normally be reached on Monday-Friday 8:00 AM - 5:00 PM EDT.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Rinehart can be reached on 571-272-4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DAB

/Kenneth B Rinehart/
Supervisory Patent Examiner, Art Unit 3743